

CYCLOSERINE (CS) Fact Sheet

Cycloserine is a simple molecule that is the structural analog of the amino acid alanine.

Dose: 500 mg – 750 mg every day usually in divided doses BID (twice a day). The initial dose is usually 250 mg BID at 12 hour intervals for the first two weeks. Do not exceed 1 gram per day.

Administration: Oral

Excretion: Renal

Distribution: Widely distributed, good CSF penetration

Adverse Reactions

Neurotoxicity

1. Psychotic disturbances – depression, aggression, excitement and confusion often associated with CS. Headache, drowsiness, tremor and convulsions also may occur. Closely observe patients receiving greater than 500 mg per day for symptoms. Assess mental status prior to therapy and observe for behavior changes while taking CS. Report any changes as soon as possible to the OSDH TB Control Officer.
2. Concentration-dependent CNS effects are usually seen at concentrations greater than 30 mcg/ml due to high dosage or inadequate renal clearance.
3. Prevention: 50 mg pyridoxine (vitamin B6) per 250 mg CS may reduce the onset of these effects.
4. Treatment: hold CS until symptoms subside, resume at reduced dose.

Other toxicities

Drug fever, rashes and cardiac arrhythmias have been reported rarely.

Drug Interactions

Alcohol

Alcohol increases the possibility and risk of epileptic seizures.

Anticonvulsant Drugs Or Sedatives

Anticonvulsant drugs or sedatives may be effective in controlling symptoms of CNS toxicity, such as convulsions, anxiety, and tremor. Conversely, CS potentiates phenytoin (Dilantin) and tranylcypromine (Parnate).

Ethionamide

Ethionamide potentiates the toxic CNS effects of CS.

Isoniazid

INH in combination with CS may result in increased CNS side effects, most notably dizziness.

Vitamine B
complex

CS increases excretion of vitamin B.